



MEMORANDUM

To: Hickory Creek Watershed Planning Group

Date: October 2010

From: Jesse Elam

Re: Project charter for Hickory Creek watershed plan

Background

The Hickory Creek Watershed Planning Group, a stakeholder group composed of local government representatives, resource agencies, advocates, and others, is developing a watershed plan for Hickory Creek and its tributaries (Spring Creek, Marley Creek, Union Ditch, and Frankfort Tributary). Overall project oversight is the responsibility of the Chicago Metropolitan Agency for Planning under a master agreement with the Illinois Environmental Protection Agency (IEPA), which is providing the funding for the project through Section 604(b) of the Clean Water Act, as authorized under the American Recovery and Reinvestment Act of 2009. The project is to be complete by August 2011. Budget and contracting details are given in the last section of this document.

Rationale for developing a watershed plan for Hickory Creek

Certain portions of Hickory Creek and its tributaries have impairments to their beneficial or “designated” uses under the federal Clean Water Act. These uses are aquatic life support and primary contact recreation — in other words, some stream segments are biologically unhealthy, while others are not safe to swim in. The state has therefore placed Hickory Creek and several tributaries on the Illinois 303(d) list,¹ a formal acknowledgment of water quality concerns. The impairments to the creek are caused by a number of factors, but the major ones are chemical pollution, contamination by fecal bacteria, and physical damage to the stream environment. The fundamental purpose of the watershed plan is to evaluate and recommend the best measures to help restore the beneficial uses in Hickory Creek, with the long-term goal of improving conditions enough that Hickory Creek and its tributaries can be removed from the 303(d) list.

¹ The state is required to produce this list every two years under the Clean Water Act. The 2008 version is available at <http://www.epa.state.il.us/water/tmdl/303-appendix/2008/2008-final-draft-303d.pdf>

Areas of emphasis for the Hickory Creek plan

Measures to help restore the beneficial uses of Hickory Creek can be grouped broadly into projects and policies. The project types include (1) stream restoration projects, including improvements to habitat or restoration of hydrology, (2) stormwater management infrastructure retrofits, (3) agricultural best management practices, and (4) wastewater treatment plant upgrades. Some mix of all of these projects will probably be needed in Hickory Creek, but the relative emphasis on each will depend on cost, the results of technical analysis, and stakeholder preferences. A major part of the watershed plan will be a *short term project implementation plan*, which will contain priority projects recommended for implementation within about five years of plan completion. It will also include implementation details such as the lead party, expected cost, financing, pollutant reduction potential, and so forth. Policy recommendations, on the other hand, primarily relate to local ordinances and comprehensive planning. While local stormwater management requirements and some aspects of zoning/subdivision codes have certainly been strengthened in recent years, some improvements may still be appropriate. And while local government planning for parks, natural areas, and trails has produced real successes, there is still a need to tie it together in the form of a *green infrastructure network*, one of the tasks of the watershed plan.

Projects and policies will be recommended based on criteria accepted by the HCWPG; discussion and a decision about these criteria are expected in fall 2010. The overarching purposes of the plan are to improve biological conditions in the stream and to reduce fecal contamination. Projects and policies must therefore address one of these goals. However, measures with benefits beyond just these are much preferred to single-purpose projects. Therefore, although standalone measures for flood control, recreation, upland habitat improvement, etc. will not be sought, projects and policies with these additional benefits should be considered much higher priorities. Similarly, there may be opportunities to include water quality elements in planned projects being undertaken for other reasons. The capital improvement programs and project “wish lists” of municipalities, park districts, and forest preserve districts should be examined during plan development to try to find opportunities to build in components that would serve the goals of the Hickory Creek plan.

Pollution reduction goals

Ideally, the Hickory Creek plan would recommend measures that would reduce pollutant loading to a certain target or “end point” judged to protect the beneficial uses of the creek. The analysis required to determine the appropriate end point can be quite complex. Considering the short timeframe and limited funding, as well as the orientation of the HCWPG toward action rather than analysis, the contractors were asked to concentrate on developing recommendations for projects and policies rather than on data analysis. Thus, while targets will be developed for the Hickory Creek plan, they will not be based on sophisticated analysis. Draft targets are expected to be developed by mid-summer 2010.

In this connection, it is expected that the Illinois Environmental Protection Agency will wish to develop a *total maximum daily load* (TMDL) for one or more stream segments and pollutants in

Hickory Creek within the next few years. A TMDL, a kind of pollution budget, is another requirement in the Clean Water Act which is triggered by being listed on the 303(d) list. It would provide the target load and therefore indicate the amount by which pollution needs to be reduced. Unlike a watershed plan, compliance with a TMDL is not purely voluntary in the sense that the portion of the TMDL allocated to wastewater treatment plants can be written into the permits for the plants. Thus, rather than only being required to reduce or at least hold loading constant after plant expansion, a treatment plant might have to reduce its current loading to meet the TMDL upon the next permit renewal, even without plant expansion. In a similar manner, allocations for urban runoff could potentially be written into permits for municipal storm sewer system permits, which could necessitate improved treatment of these stormwater discharges.

While a TMDL must, by federal law, eventually be developed for any stream on the 303(d) list, TMDL development on a particular stream can be delayed in favor of other priorities. Development of a TMDL in Hickory Creek was originally scheduled to begin by 2010.² CMAP requested that IEPA delay this at least until the watershed plan is complete; Hickory Creek is not now on the draft 2010 – 2012 two-year schedule for TMDL development.³ If stakeholders are able to make progress in implementing the projects and policies in the watershed plan, developing a TMDL for Hickory Creek would assume a lower priority. Were progress sufficient to remove the stream from the 303(d) list, a TMDL would not have to be done at all.

Future conditions

Future land use is perhaps the most important determinant of whether stream conditions improve or decline. There is a great deal of information showing that increasing amounts of impervious surface (streets, parking lots, roofs, etc.) correlate strongly and negatively with the biological health of streams. While the use of better stormwater management practices alleviates this somewhat, an important part of watershed planning is to find ways to moderate the increase in impervious surfaces without compromising development potential. A potential policy recommendation is therefore to change zoning codes and stormwater management ordinances to minimize impervious surface creation, or to retain more runoff on-site.

CMAP completed a comprehensive plan, called *GO TO 2040*, for the seven-county Chicago region, which was adopted by the CMAP Board in October 2010. Extensive outreach to municipal officials was conducted during the three-year development of the plan. Perhaps the most important aspect of *GO TO 2040* is its emphasis on establishing livable communities — that is, compact developments with a mixture of uses served by transit. It is important to CMAP to have local “trials” in planning livable communities, and it clearly relates to the objective of minimizing impervious surface creation. Therefore, the analysis of future land use will include a presentation of the results of growing according to the recommendations in *GO TO 2040*.

Stakeholders, decision-making, and community involvement

² <http://www.epa.state.il.us/water/tmdl/303-appendix/2008/appendix-a3-schedule.pdf>

³ <http://www.epa.state.il.us/water/tmdl/303-appendix/2010/appendix-a3-2-yr-sched-draft-3-26-10.pdf>

It is important that the watershed plan be a technically sound, results-oriented strategy for improving conditions in the creek, with specific actions recommended for specific stakeholders. It should be a road map to a cleaner stream that is broadly agreed upon, free of posturing, and which stakeholders intend to implement. Besides the environmental benefits of implementing the plan, it should reduce future conflict by laying out clear expectations. In order to achieve this, the HCWPG needs to have a decision-making structure in place that is capable of vetting recommendations adequately. The Center for Neighborhood Technology, one of the partners in the project, has been asked to take the lead in proposing a structure for the HCWPG that will result in well-considered recommendations.

For conceptual purposes, the stakeholders in the HCWPG can be broken down very roughly into implementers, resources, advocates, and interested citizens:

- The implementers are organizations that own land or have at least partial operational control over activities that affect Hickory Creek. They primarily include municipalities, park districts, and the forest preserve districts. Implementers are the ones who would need to make changes in their operations or policies, in some cases via ordinance, or commit local funding to projects recommended in the plan. Thus, the recommendations in the watershed plan must be sensitive to implementers' interests.
- Resources are organizations that could provide funding or technical assistance to implementers or interested citizens within Hickory Creek. They include the Soil and Water Conservation District, Army Corps of Engineers, Natural Resource Conservation Service, and others.
- Advocates are organizations that promote policies to benefit the environment through research, outreach, litigation, and other means, but do not have operational control of activities affecting the stream. These organizations include Sierra Club, Prairie Rivers Network, and others. They attempt to influence decisions made by implementers, e.g., through review of wastewater treatment plant permits and facility plans. Advocates should treat the watershed plan as a road map for their own activities, as well: they should work with the implementers to facilitate implementation of the recommendations in the plan.
- Interested citizens, finally, have not been a major part of the HCWPG thus far. The Center for Neighborhood Technology, again, will be trying to engage the public throughout the planning process. In particular, it will be holding several workshops, at least one of which will be devoted to getting citizen input on draft plan recommendations.

Adoption and implementation of watershed plan

The watershed plan is an advisory document. When it is complete, each participating implementer in the watershed will be asked to adopt the plan with a resolution to the effect that it supports collective implementation of the plan. This is a means of formalizing agreement. CMAP requests that persons in the HCWPG representing implementers keep their elected officials informed of watershed plan progress so that they are aware of the project by the time it is ready for adoption. CMAP staff can also make presentations to village boards or other governing bodies as requested. There is precedent for formal adoption in other watershed plans

CMAAP has produced; the three plans developed for watersheds within the Kishwaukee basin in 2008 were each adopted by resolution by the implementers within them.

This does not, of course, mean the policy recommendations of the plan automatically go into place. Ordinances may need to be revised, while local funding may need to be committed to projects through normal budgeting processes. Given the difficult fiscal situation that many implementers face, the plan has to be sensitive to the need to minimize local funding contributions. External funding would be expected to cover most of the costs of projects in the short term implementation plan, and it is CMAAP's intent to try to help secure funding for capital projects in the Hickory Creek watershed. However, the need for some local funding cannot be avoided. Ways of raising such revenue will be considered in the plan.

A major flaw in watershed plans of the past has been the lack of a structure for overseeing plan implementation. Therefore the Center for Neighborhood Technology has been asked to study ways of continuing the work of the HCWPG after the plan is complete.

Plan product and information dissemination

It is important for the watershed plan to be as clear, approachable, and visually/verbally engaging as possible. The length and complexity of the plan must be minimized; as much background material and very technical information as possible will be demoted to appendices. The overall organization scheme of the plan will be approximately the same as in a recent CMAAP watershed plan.⁴

Budget and contracting

The grant award for the Hickory Creek project is \$209,520, with a match obligation for an additional \$58,200. In-kind labor by stakeholders in the HCWPG will be used to fulfill the match obligation. Local governments in the watershed were asked to provide resolutions of support for the project and for contributions of in-kind labor. The Villages of Frankfort, Mokena, Orland Park, Tinley Park, and New Lenox, as well as the City of Joliet, the Will County Stormwater Management Planning Committee, Will County Board, and the Forest Preserve District of Will County each passed such resolutions in mid-2009.

Two overall types of activity are being conducted as part of watershed plan development: (1) the technical analysis, including writing the plan document itself, and (2) watershed coordination, including public outreach. A team of contractors led by Geosyntec was chosen to conduct the technical analysis. The consultant selection process was initiated through a request for proposals issued by CMAAP in July 2009, with a scope of work developed collaboratively with the HCWPG. The proposals were reviewed by a group composed of two CMAAP staff and five HCWPG members (two from municipalities, two from environmental advocacy groups, and one from the Army Corps of Engineers). Shortlisted firms were invited to an interview with the entire HCWPG, and Geosyntec was chosen. Subcontractors to Geosyntec include Cowhey Gudmundson Leder, Ltd. and Clark-Dietz. The watershed coordination tasks are being conducted by the Center for Neighborhood Technology (CNT), which was chosen using a

⁴ www.cmap.illinois.gov/upperkish.aspx

similar process. The Center for Neighborhood Technology will be hosting three public workshops, publishing three brochures on different topics relating to watershed planning, and maintaining a website for the HCWPG in addition to facilitating HCWPG meetings. In addition, CNT has been asked to provide input into recommended policies for local governments, especially in the area of green infrastructure.

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